

**MINOR MODIFICATION TO  
CONSTRUCTION PERMIT  
OFFICE OF AIR MANAGEMENT**

Uniroyal Technology Corporation  
2001 West Washington Avenue  
South Bend, IN 46601

is hereby authorized to modify CP 141-6333-00146 equipment list from:

- (c) nine (9) adhesive blending churns (ID Nos. 1, 2, 23, 24, 25, 26A, 26B, 54, and 55) with a total maximum processing capacity of 5,802 lb/hr, each using a condenser for VOC control;
- (d) seven (7) adhesive holding tanks, five (5) tanks each with a capacity of 3,000 gallons (ID Nos. T-3, T-4, T-5, T-8, and T-9) and two (2) tanks each with a capacity of 6,000 gallons (ID Nos. T-1 and T-2);
- (e) two (2) product canning lines, one (1) for sealant canning and one (1) for adhesive canning;

to the following:

- (c) eight (8) adhesive blending churns (ID Nos. 1, 2, 23, 25, 26, 54, 55, and 56) with a total maximum processing capacity of 6,552 lb/hr, each using a condenser for VOC control;
- (d) six (6) adhesive holding tanks, four (4) tanks each with a capacity of 3,000 gallons (ID Nos. T-3, T-4, T-5, and T-9) and two (2) tanks each with a capacity of 6,000 gallons (ID Nos. T-1 and T-2);
- (e) three (3) product canning lines, one (1) for nonsolvent based formulas and two (2) for adhesive canning;

This permit is issued to the above mentioned company (herein known as the Permittee) under the provisions of 326 IAC 2-1 and 40 CFR 52.780, with conditions listed on the attached pages.

Minor Modification Construction Permit No.: MMCP-141-8383-00146	
Construction Permit No.: CP-141-6333 Plt ID-141-00146 issued November 26, 1996	
Issued by:  Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date:

### **Operation Conditions**

11. That pursuant to 326 IAC 6-3 (Process Operations), the cyclone and the baghouses (ID Nos. DC-1, DC-2, DC-3, DC-4 and DC-5) shall be in operation at all times when material blending processes are in operation. Pursuant to the requirements of 326 IAC 6-3-2, the combined allowable particulate matter (PM) emission rate shall not exceed 9.8 pounds per hour.

## Indiana Department of Environmental Management Office of Air Management

### Technical Support Document (TSD) for Minor Modification to Construction Permit

#### Source Background and Description

IN	Source Name:	Uniroyal Technology Corporation
	Source Location:	2001 West Washington Avenue, South Bend,
	County:	St. Joseph
	Minor Modification Construction Permit No.:	CP-141-8383-00146
	SIC Code:	2754
	Permit Reviewer:	Holly M. Stockrahm

The Office of Air Management (OAM) has reviewed an letter from Uniroyal Technology Corporation proposing changes in the construction of Phase II of the construction permit CP 141-6333 Plt ID 141-00146, issued on November 26, 1996 for a sealant and adhesive manufacturing plant. The changes requested are in the equipment listed on page 1 of 9 of the permit from:

- a
- (c) nine (9) adhesive blending churns (ID Nos. 1, 2, 23, 24, 25, 26A, 26B, 54, and 55) with total maximum processing capacity of 5,802 lb/hr, each using a condenser for VOC control;
  - (d) seven (7) adhesive holding tanks, five (5) tanks each with a capacity of 3,000 gallons (ID Nos. T-3, T-4, T-5, T-8, and T-9) and two (2) tanks each with a capacity of 6,000 gallons (ID Nos. T-1 and T-2);
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to the following:

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- (e) three (3) product canning lines, one (1) for nonsolvent based formulas and two (2) for adhesive canning;

There is an increase in throughput in item (c), which will result in an increase in emissions.

#### Recommendation

The staff recommends to the Commissioner that the construction and operation be approved. This recommendation is based on the following facts and conditions:

Information, unless otherwise stated, used in this review was derived from the letter received on March 27, 1997, and additional information submitted by the applicant.

## Emissions Calculations

Emissions from the nonsolvent based formulas canning line are negligible.

Emissions from the decrease in the number of adhesive holding tanks will not change emissions significantly.

### Adhesives Blending:

Information provided by Uniroyal indicates that the maximum adhesives processing rate proposed increase is 6552 lb/hr - 5802 lb/hr = 750 lb/hr (372 lb/hr of toluene, 139 lb/hr of hexane, 36 lb/hr of xylene, and 203 lb/hr of solids). Emissions from adhesive blending are calculated as follows:

VOC (uncontrolled) = (372 + 139 + 36) lb/hr \* 2% = 21 lb/hr \* 8760 hr/yr \* ton/2000 lb = 93 ton/yr

VOC (controlled) = 21 lb/hr \* (1 - 75%) = 5.25 lb/hr \* 8760 hr/yr \* ton/2000 lb = 23 ton/yr

PM (uncontrolled) = 203 lb/hr \* 1% = 2.03 lb/hr \* 8760 hr/yr \* ton/2000 lb = 8.89 ton/yr

PM (controlled) = 2.03 lb/hr \* (1 - 99%) = 0.02 lb/hr \* 8760 hr/yr \* ton/2000 lb = 0.09 ton/yr

HAP (uncontrolled) = 372 lb/hr \* 2% = 7.44 lb/hr = 179 lb/day = 33 ton/yr

HAP (controlled) = 7.44 lb/hr \* (1 - 75%) = 1.86 lb/hr = 44.64 lb/day = 8.1 ton/yr

HAPs (uncontrolled) = VOC (uncontrolled)

HAPs (controlled) = VOC (controlled)

## Total Potential and Allowable Emissions

Indiana Permit Allowable Emissions Definition (after compliance with applicable rules, based on 8,760 hours of operation per year at rated capacity). These are emissions due to the increased throughput in adhesives processing.

Pollutant	Allowable Emissions (tons/year)	Potential Emissions (tons/year)	PTE (tons/year)
Particulate Matter (PM)	43	8.9	0.09
Particulate Matter (PM10)*	43	8.9	0.09
Sulfur Dioxide (SO <sub>2</sub> )		0	0
Volatile Organic Compounds (VOC)		93	23
Carbon Monoxide (CO)		0	0
Nitrogen Oxides (NO <sub>x</sub> )		0	0
Single Hazardous Air Pollutant (HAP)		33	8.1
Combination of HAPs		93	23

\*assume PM = PM10

- (a) Allowable emissions from the blending processes are determined from the applicability of rule 326 IAC 6-3.

Throughput = 6552 lb/hr adhesives, and 780 lb/hr sealant, P = 3.67 ton/hr

E =  $4.1(P)^{0.67}$

=  $4.1(3.67)^{0.67}$

= 9.8 lb/hr = 235 lb/day = 40 ton/yr

Particulate matter emissions comply with 326 IAC 6-3 limit.

- (b) The potential emissions before control are less than the allowable emissions, therefore, the potential emissions before control are used for the permitting determination.
- (c) Allowable emissions (as defined in the Indiana Rule) of volatile organic compounds are greater than 25 tons per year. Therefore, pursuant to 326 IAC 2-1, Sections 1 and 3, a construction permit modification is required.
- (d) Allowable emissions (as defined in the Indiana Rule) of a single hazardous air pollutant (HAP) are greater than 10 tons per year and/or the allowable emissions of any combination of the HAPs are greater than 25 tons per year. Therefore, pursuant to 326 IAC 2-1, a construction permit modification is required.
- (e) Pursuant to the IDEM's Policy on Air Toxic Rules, dated December 13, 1995, IDEM will not enforce the provisions of 326 IAC 2-1-1(b)(1)(H), as adopted by the Air Board on March 10, 1994. This means that modification of a major source of HAPs which will increase the allowable emissions of any one (1) HAP by 4 tons per year or any combination of HAPs by 10 tons per year will not be required to obtain a construction permit. The Policy is in effect immediately and will continue to be in effect until the effective date of amendments to Indiana's rule for new and modified sources of HAPs. This Policy may be extended or modified at IDEM's discretion.

However, this construction permit is required because of the requirements of 326 IAC 2-1, Sections 1 and 3.

### County Attainment Status

- (a) Volatile organic compounds (VOC) and oxides of nitrogen are precursors for the formation of ozone. Therefore, VOC and NO<sub>x</sub> emissions are considered when evaluating the rule applicability relating to the ozone standards. St. Joseph County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO<sub>x</sub> emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) St. Joseph County has been classified as nonattainment for total suspended particulates (TSP). Therefore, these emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3.

### Net Emissions After the Increase in Production for the Whole Source

Emission source	Pollutant	Before Change (ton/yr)	After Change (ton/yr)	Net Change After Control (ton/yr)
adhesive mixing	VOC/HAP	125	148	+23
	PM	1.5	1.6	0.09
adhesive tank	VOC/HAP	negligible	negligible	negligible
	PM	0	0	0

nonsol. canning	VOC/HAP	negligible	negligible	negligible
	PM	0	0	0

The net emissions increase does not change the Minor PSD status of the source.

This existing source is **not** a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, no non-attainment regulated pollutant is emitted at a rate of 100 tons per year, and it is not in one of the 28 listed source categories.

### Part 70 Permit Determination

#### 326 IAC 2-7 (Part 70 Permit Program)

This existing source has not submitted their Part 70 application. This status is based on all the air approvals issued to the source. This status has been verified by the OAM inspector assigned to the source. The company stated that the BACT requirements remain applicable and will comply with all requirements.

### Federal Rule Applicability

No additional New Source Performance Standards (326 IAC 12) and 40 CFR Part 63 rules are applicable to this facility due to the increase in adhesive blending capacity, tank replacement

### State Rule Applicability

The following condition is the only condition that will change from the previous permit.

#### 326 IAC 6-3 (Particulate Emissions Limitations for Process Operations)

Pursuant to 326 IAC 6-3 (Process Operations), the condensers shall be operated at all times that the blending process is in operation, and PM emissions shall not exceed the allowable particulate matter (PM) emission rate of 9.8 pounds per hour. Based on this calculations, the controlled potential emissions are less than the allowable emissions, therefore, this process complies with the rule.

### Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions of the 187 hazardous air pollutants set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Management (OAM) Construction Permit Application Form Y.

- (a) This modification will emit levels of air toxics less than those which constitute a major source according to Section 112 of the 1990 Amendments to Clean Air Act.
- (b) See the emissions calculations section for detailed air toxic calculations.

### Conclusion

The increase in the processing rate of adhesives will be subject to the conditions of the attached proposed **Minor Modification of Construction Permit No. MMCP-141-8383-00146.**